

## EVALUATION KIT CONTENT

- 4 x AVBStreamer module with Dual RJ45
- 4 x Ethernet CAT5E cables
- AVBStreamer tools for routing, discovery and firmware upgrade.
- SDK user manual with API details
- Pre-compiled binary firmware for various configurations

Optional PoE modules available on request.

## FEATURES

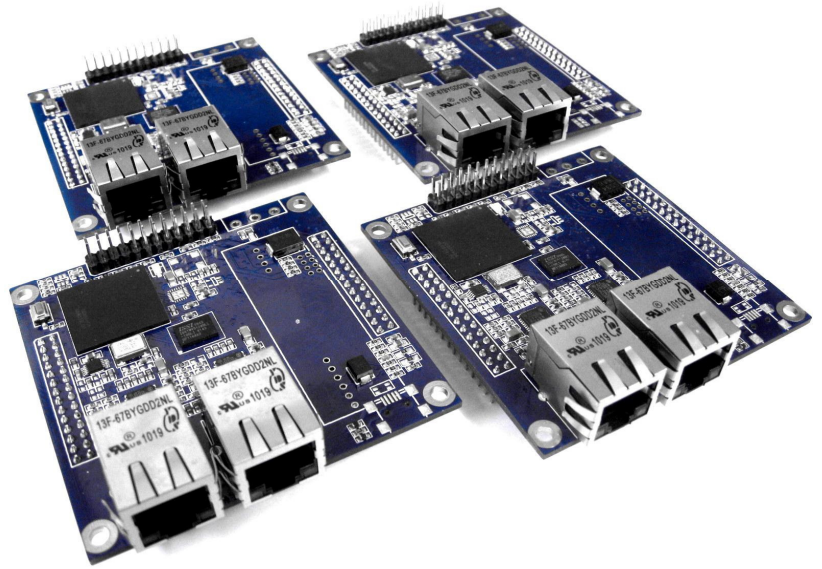
- Low cost, License & Royalty free module
- Plug & Play A/V networking in 3"x3" square
- Upgradeable firmware
- Available for OEM/ ODM integration

## Hardware

- 400MHz multi-threaded XMOS G4 CPU
- Up to 16 x IN, 16 x OUT configuration
- 24-bit resolution / 48/96/192 KHz
- Audio data in I2S or TDM (Master/Slave)
- Ethernet on RJ45, Auto MDIX
- Dual Ethernet connector
- Optional Power over Ethernet (PoE)
- 8 configurable GPIO via SPI/Ethernet
- SPI interface (Slave/Master)

## Firmware

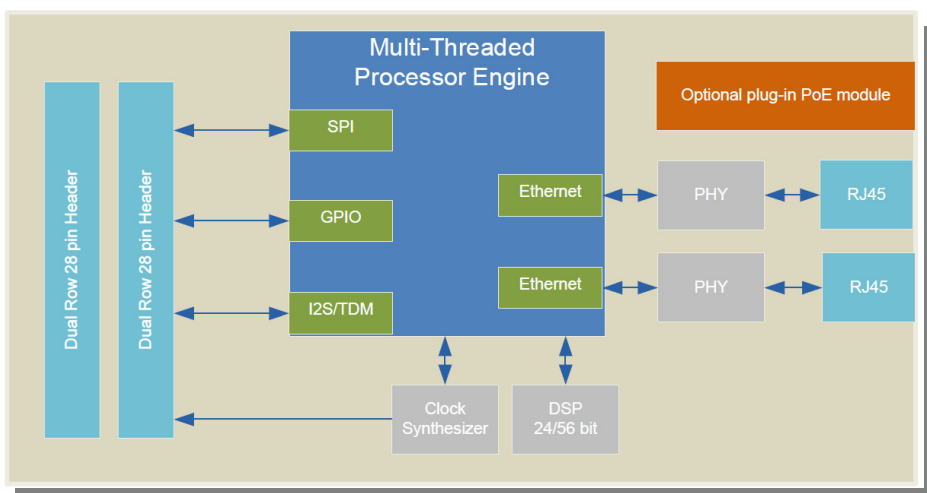
- Complete API for control of interfaces
- Self discovery of device with ZeroConf
- DHCP or Auto-IP addressing
- Plug&Play configuration
- Remote firmware upgrade over network



**AVBStreamer** module is a fast route to integrating the latest Audio Video Bridging (AVB) standards into your products. Capable of streaming multiple low latency, synchronized and uncompressed audio channels over Ethernet networks, our open product architecture fully leverages the benefits of unified IEEE protocols. Based on a modular concept of pre-built firmware configurations, the module also includes a wide range of hardware interfaces for greater flexibility and potential for customization. AVBStreamer provides an appealing total solution for manufacturers looking to implement AVB with limited in-house integration and a fast track to product development.

This evaluation kit consisting of 4 x AVBStreamer modules is the perfect AVB starter kit. Based on DSP4YOU's innovative ZeroConf concept, A/V networking has never been so easy. Modules are automatically discovered and their respective AVB capabilities advertised via broadcast packets. While the AVBStreamer's tools allowing discovery and stream routing in a couple of clicks, programmers also have the choice to develop their own applications using the provided API. Basic TCP/UDP programming is all it takes to fully integrate AVBStreamer into your product.

## System Diagram



*Don't re-invent the wheel!  
Instead, leverage our in-depth knowl-  
edge of AVB standards to fast-track  
your products to the market.*

## HARDWARE TECHNICAL SPECIFICATIONS

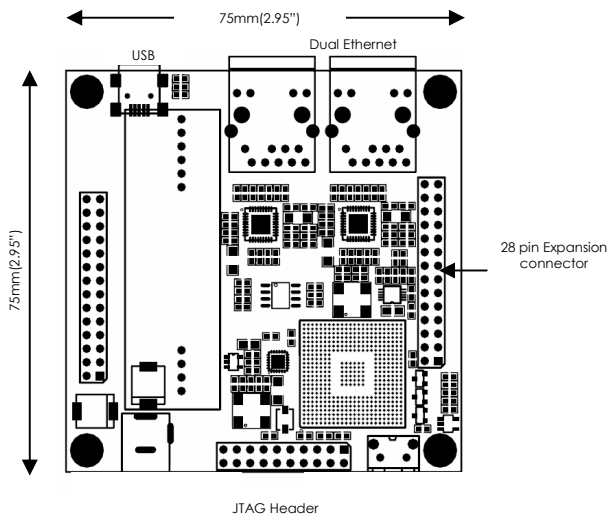
Item	Description
Processor	400MHz Quad Core processor - XMOS G4 CPU
Master Clock (MCLK)	Low Jitter clock synchronized to the PTP word clock
SPI	SPI Slave interface
Ethernet	100 Mbps interface, Auto MDIX support Dual Ethernet connector serves as Daisy Chain or Redundant connector depending on selected binary
Digital Audio Interface (DAI)	I2S or TDM format - Master or Slave
Optional Fixed point DSP	Up to 8channels of custom Digital Signal Processing firmware available on request. Basic Audio processing including Gain, Mute, Equalization (PEQ/Graphic EQ/Shelf), Matrix mixing, FIR & IIR filters, Compressor/Limiter, RMS/Peak metering. Remote firmware upgrade and control over SPI or Ethernet
GPIO / Interrupts	Programmable by Ethernet or SPI interface - GPIO count depending on firmware configuration
Memory	Max 512kb EEPROM / 4Mb SPI flash reserved to processor configuration
Power Over Ethernet (PoE)	Optional PoE module allows remote power configuration over standard CAT5/6e cables - Class 2 device
Power	On-board converters allow powering from single +5V DC supply
Connectors	2 x 28pin expansion connectors, 2.5mm pitch JTAG connector, DC power connector,
Dimensions (H x W x D) mm	75 x 75 x 18 mm

## FIRMWARE & DEVELOPMENT TOOLS

A complete set of API allowing control, discovery and firmware upgrade over SPI or Ethernet is provided free of charge. Integration to customer software available for those with basic socket programming experience (UDP & TCP). For manufacturers not willing to go through software integration, a complete set of tools for firmware upgrade, routing and discovery is also provided free of charge with any purchase of AVB Streamer modules or

Item	Description
AVB Stack	IEEE 802.1as, IEEE 1722 IEEE 802.1Qav
TCP/ UDP / IP Stack	Custom API for control of AVB stack, GPIO, SPI bus, TCP socket, UDP socket
SPI (Master/Slave)	Custom API for control of AVB stack, TCP/UDP/IP stack, GPIO
Firmware Upgrade	Device Field upgrade over SPI or Ethernet

## Mechanical Drawing



## ODM and Contact Info

From system requirements, to design and implementation, DSP4YOU can partner with you to develop breakthrough A/V products on time and on budget. Save on cost and avoid headaches by leveraging our engineering experience and extensive manufacturing network in Southern China. Contact our sales team for more information at [sales@dsp4you.com](mailto:sales@dsp4you.com)



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